IN THE CLAIMS

*A listing of the claims presented in this patent application appears below. This listing replaces all prior versions and listing of claims in this patent application.*

*Claims 1 – 6   (Cancelled)*

7. (Currently Amended) A signal processing device for receiving data which has been converted into a digital signal in predetermined sampling intervals, compressing the input original data, and recording the resultant data into a memory, the device comprising:

thinning means for thinning the original data into thinned data having a sampling interval different from the predetermined sampling interval;

determining means for analyzing the original data in predetermined constant intervals, and based on a predetermined criterion, determining which of the original data and the thinned data of the thinning means is selected;

data writing means for writing selected data which is one of the original data and the thinned data of the thinning means, into the memory in the predetermined constant intervals, based on a determination result of the determining means;

information writing means for writing determination result information of the determining means into the memory;

wherein the predetermined criterion of the determining means is determined by comparing a result of calculation of a feature amount of each piece of data within each predetermined sampling interval of original data, with a predetermined threshold value; and

~~The signal processing device of claim 6,~~ wherein the feature amount is a sum value of absolute differential values between each adjacent piece of data within each predetermined sampling interval of original data.

8. (Currently Amended) A signal processing device for receiving data which has been converted into a digital signal in predetermined sampling intervals, compressing the input original data, and recording the resultant data into a memory, the device comprising:

- 3 -

thinning means for thinning the original data into thinned data having a sampling interval different from the predetermined sampling interval;

determining means for analyzing the original data in predetermined constant intervals, and based on a predetermined criterion, determining which of the original data and the thinned data of the thinning means is selected;

data writing means for writing selected data which is one of the original data and the thinned data of the thinning means, into the memory in the predetermined constant intervals, based on a determination result of the determining means;

information writing means for writing determination result information of the determining means into the memory;

wherein the predetermined criterion of the determining means is determined by comparing a result of calculation of a feature amount of each piece of data within each predetermined sampling interval of original data, with a predetermined threshold value; and

~~The signal processing device of claim 6,~~ wherein the feature amount is a maximum value of absolute differential values between each adjacent piece of data within each predetermined sampling interval of original data.


9. (Currently Amended) A signal processing device for receiving data which has been converted into a digital signal in predetermined sampling intervals, compressing the input original data, and recording the resultant data into a memory, the device comprising:

thinning means for thinning the original data into thinned data having a sampling interval different from the predetermined sampling interval;

determining means for analyzing the original data in predetermined constant intervals, and based on a predetermined criterion, determining which of the original data and the thinned data of the thinning means is selected;

data writing means for writing selected data which is one of the original data and the thinned data of the thinning means, into the memory in the predetermined constant intervals, based on a determination result of the determining means;

information writing means for writing determination result information of the determining means into the memory;

wherein the predetermined criterion of the determining means is determined by comparing a result of calculation of a feature amount of each piece of data within each predetermined sampling interval of original data, with a predetermined threshold value; and

~~The signal processing device of claim 6,~~ wherein the feature amount is a sum value or a maximum value of second-order derivatives between each adjacent piece of data within each predetermined sampling interval of original data.


10. (Currently Amended) A signal processing device for receiving data which has been converted into a digital signal in predetermined sampling intervals, compressing the input original data, and recording the resultant data into a memory, the device comprising:

thinning means for thinning the original data into thinned data having a sampling interval different from the predetermined sampling interval;

determining means for analyzing the original data in predetermined constant intervals, and based on a predetermined criterion, determining which of the original data and the thinned data of the thinning means is selected;

data writing means for writing selected data which is one of the original data and the thinned data of the thinning means, into the memory in the predetermined constant intervals, based on a determination result of the determining means;

information writing means for writing determination result information of the determining means into the memory;

wherein the predetermined criterion of the determining means is determined by comparing a result of calculation of a feature amount of each piece of data within each predetermined sampling interval of original data, with a predetermined threshold value; and

~~The signal processing device of claim 6,~~ wherein the feature amount is any combination of two or more of a sum value and a maximum value of absolute differential values between each adjacent piece of data within each predetermined sampling interval of original data, and a sum value or a maximum value of second-order derivatives between the each adjacent piece of data.

11. (Currently Amended) A signal processing device for receiving data which has been converted into a digital signal in predetermined sampling intervals, compressing the input original data, and recording the resultant data into a memory, the device comprising:

thinning means for thinning the original data into thinned data having a sampling interval different from the predetermined sampling interval;

determining means for analyzing the original data in predetermined constant intervals, and based on a predetermined criterion, determining which of the original data and the thinned data of the thinning means is selected;

data writing means for writing selected data which is one of the original data and the thinned data of the thinning means, into the memory in the predetermined constant intervals, based on a determination result of the determining means;

information writing means for writing determination result information of the determining means into the memory;

wherein the predetermined criterion of the determining means is determined by comparing a result of calculation of a feature amount of each piece of data within each predetermined sampling interval of original data, with a predetermined threshold value; and

~~The signal processing device of claim 6,~~ wherein the predetermined threshold value is changed, depending on the feature amount of original data.


*Claims 12 – 14      (Cancelled)*


- 6 -